REJ10J0746-0110

Everywhere you imagine. RENESAS

R8C/15, R8C/17 StarterKit

Tutorial

RENESAS SINGLE-CHIP MICROCOMPUTER

M16C FAMILY / R8C/Tiny SERIES

Rev.1.10
Revision date : Mar 01, 2005

Renesas Solutions Corp.
www.renesas.com

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1. accessory softwares to install

1) Note the following points before installing.

a) The M3T-NC8C has already been installed.

b) The M3T-NC30WA has already been installed.

c) The emulator software has already been installed.

Install the software attached to this product after uninstalling the above software.

2) The directory and file names including space cannot be used.

3) The sample program uses C compiler, High-performance Embedded Workshop and emulator software to this product.

4) Do not copy the sample program on “desktop”. Also do not copy it to the folder which includes “space” for the folder name. “Space” cannot be recognized in High-performance Embedded Workshop.

2. Until a sample program is operated with an emulator software

Follow the procedure below to operate a sample program with an emulator software.

2.1 Flash programmer (Flash development toolkit) Installation

2.2 Emulator Software, C Compiler and High-performance Embedded Workshop Installations

2.3 USB driver installation

2.4 Operate Sample Program

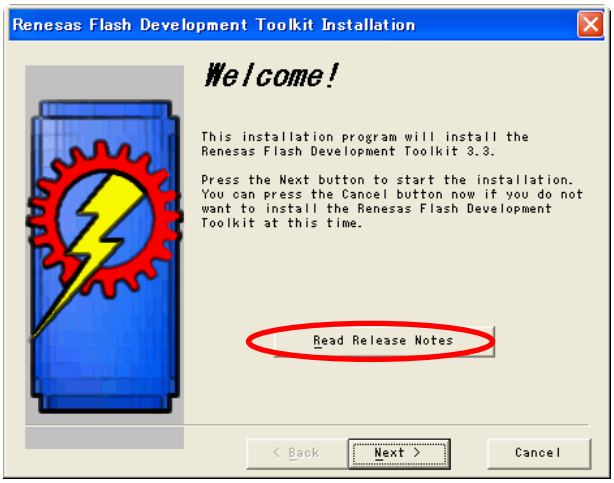
2.1 Flash programmer (Flash development toolkit) Installation

1) Installation

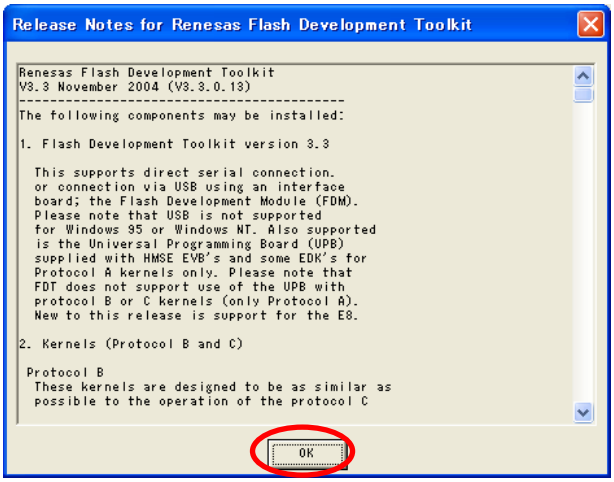
Double-click a CD-ROM (¥ programmer ¥) installer.

2) An installation procedure is shown.

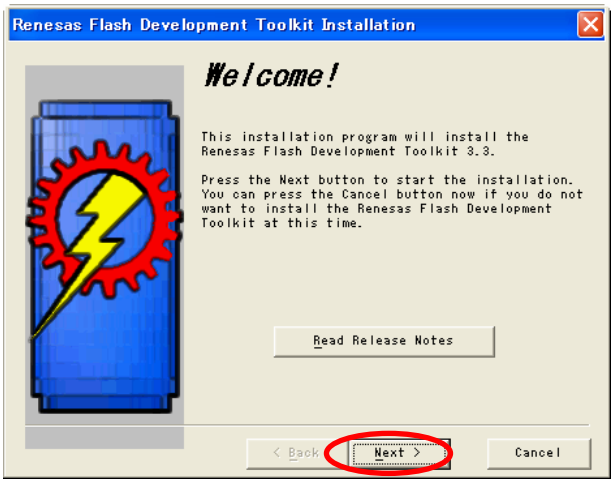
Read < Read Release Notes>. befor continuing the installation.



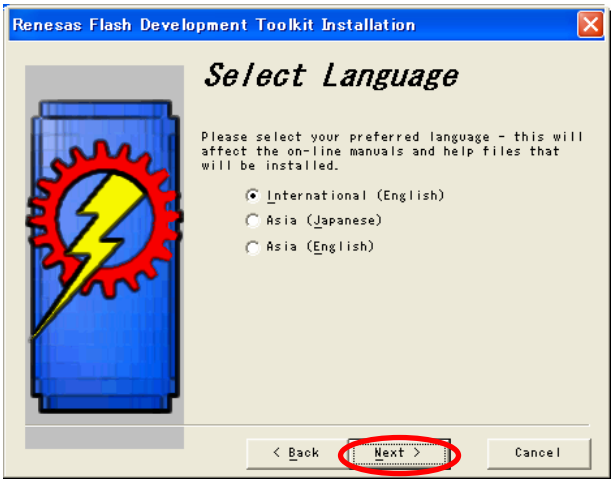
Click “OK”.



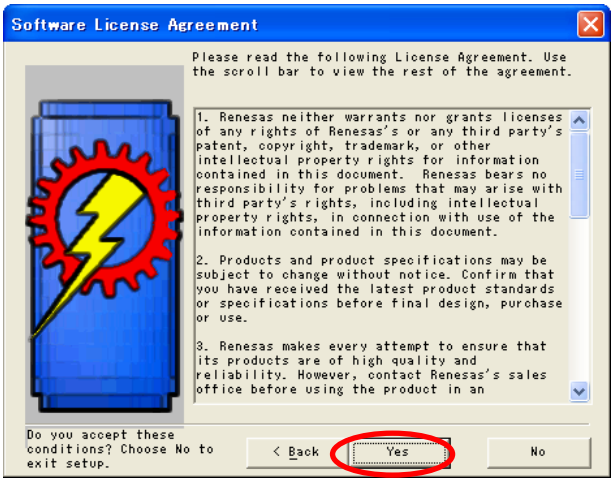
Click “Next”



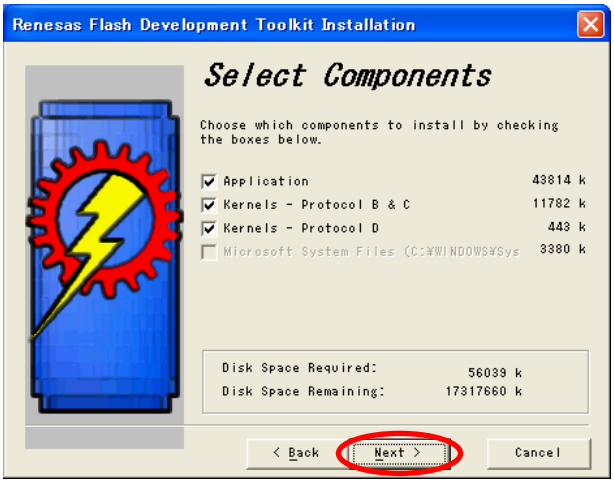
Select language to be used and click "Next"



Only when you agree with License Agreement, click "Yes".



Click “Next”.



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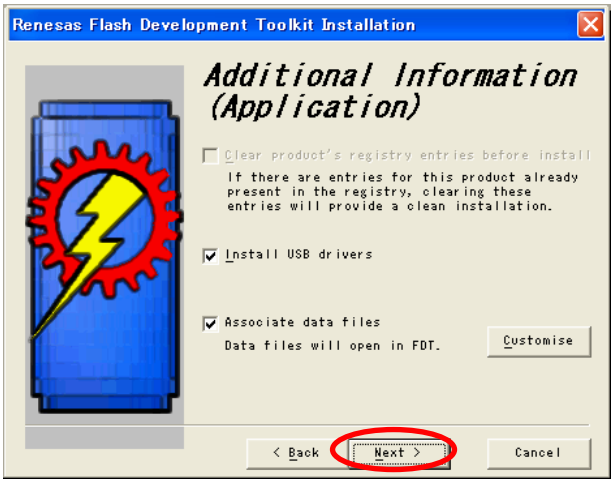
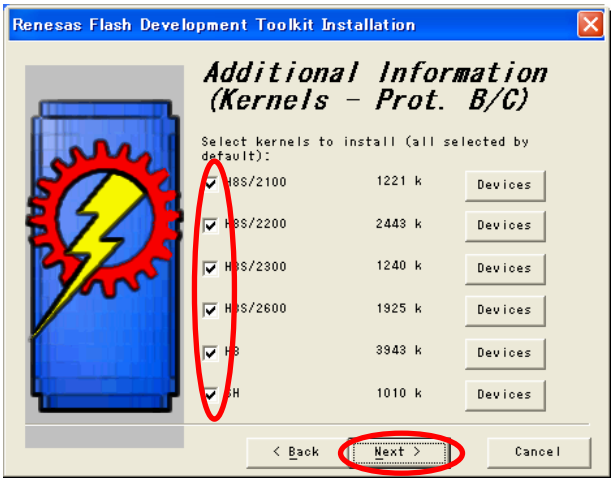
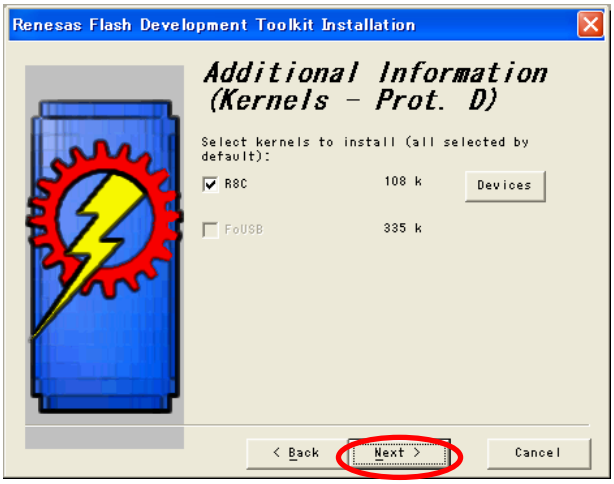


Remove a check. Click “Next”

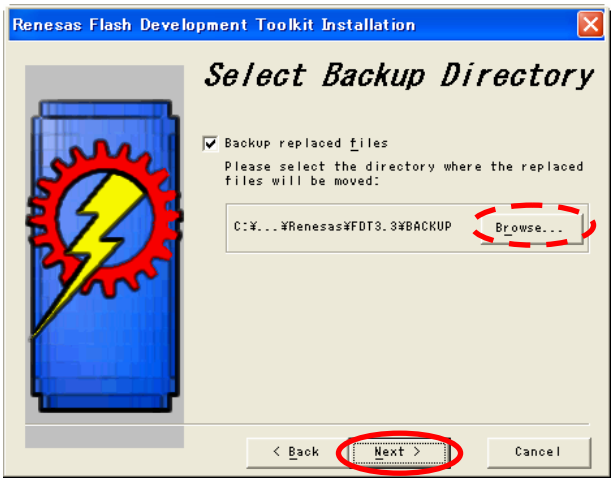


Click “Next”.

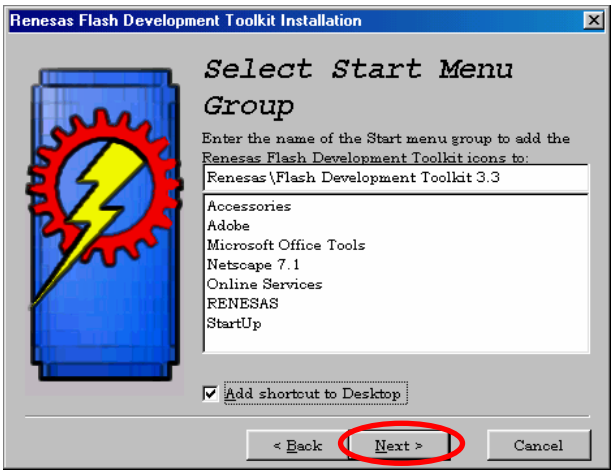


Refer to a new folder name, or select from the existing folder list and Click “Next”.

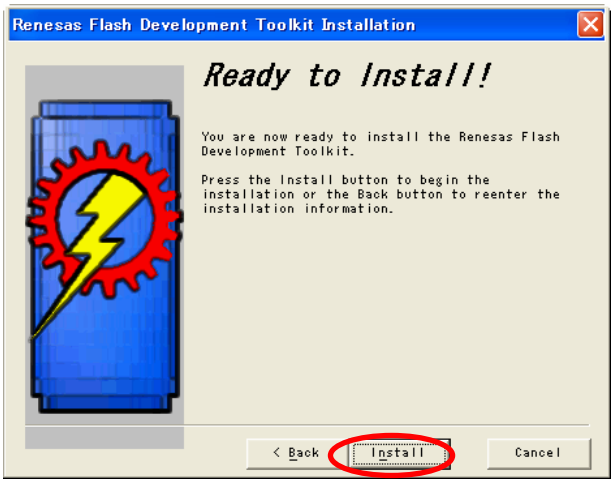
Refer to a new folder name, or select from the existing folder list and Click “Next”.



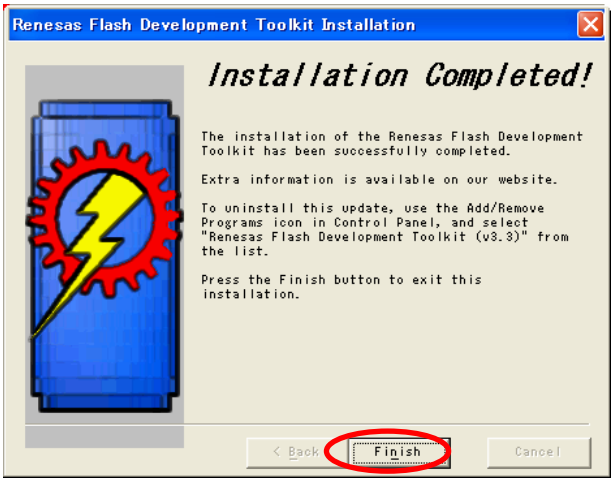
Click “Next”.



Click “Install”.



Click “finish”.



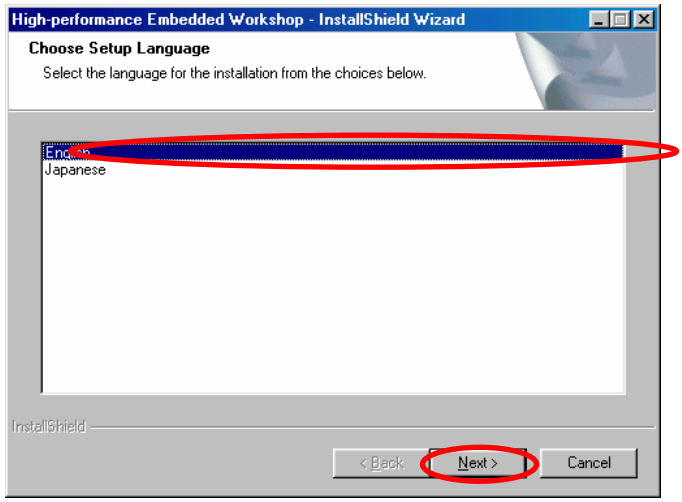
2.2 Emulator Software, C Compiler and High-performance Embedded Workshop Installations

1) Installation

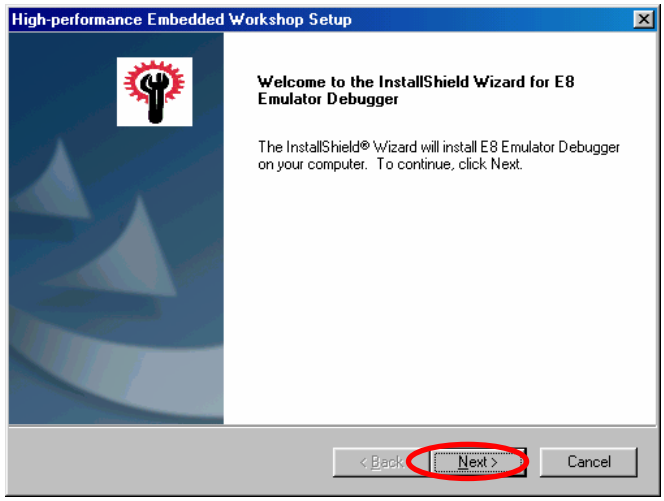
Double-click an installer of CD-ROM ¥ dlp_tool ¥.

2) Installation procedures are described below.

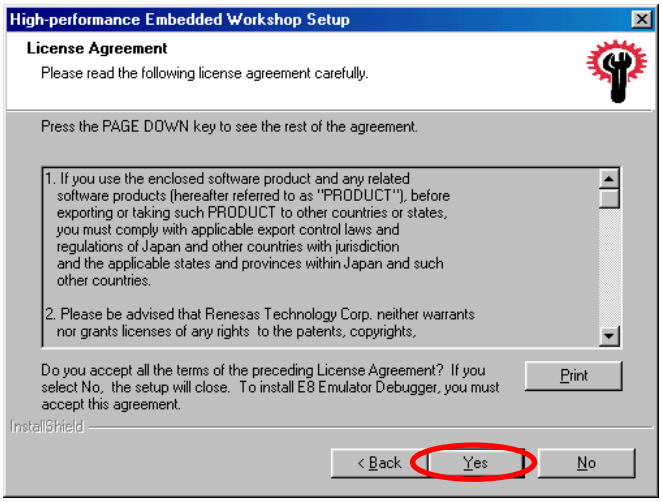
Select the language to be used and click “Next”.



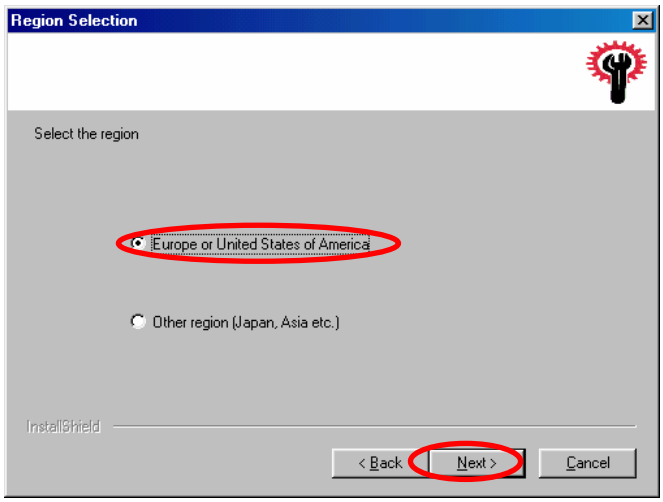
Click “Next”



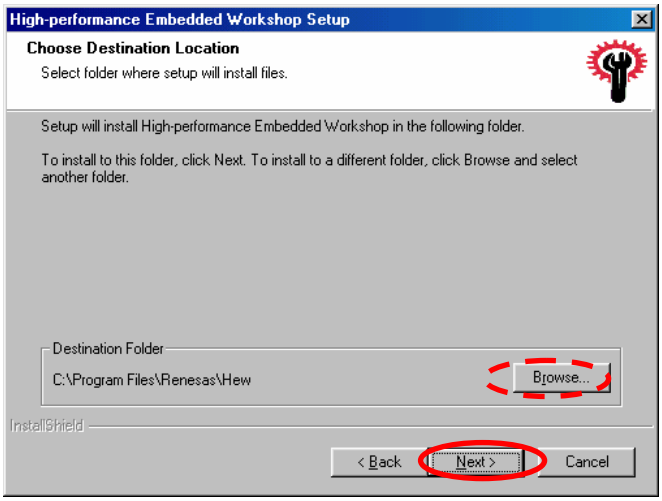
Only when you agree with License Agreement, click "Yes".



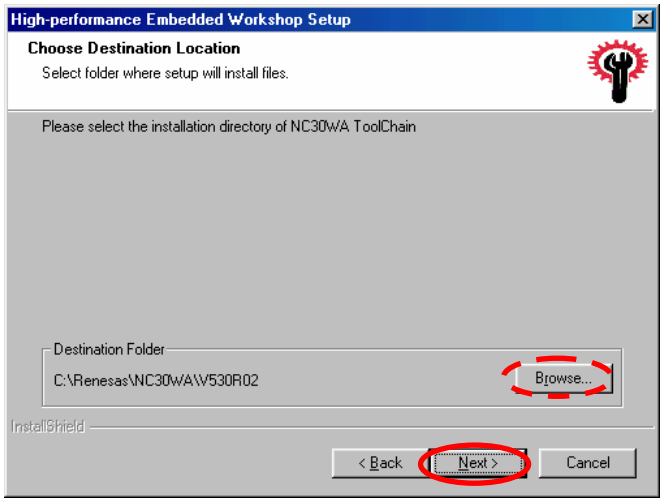
Select all and click “Next”



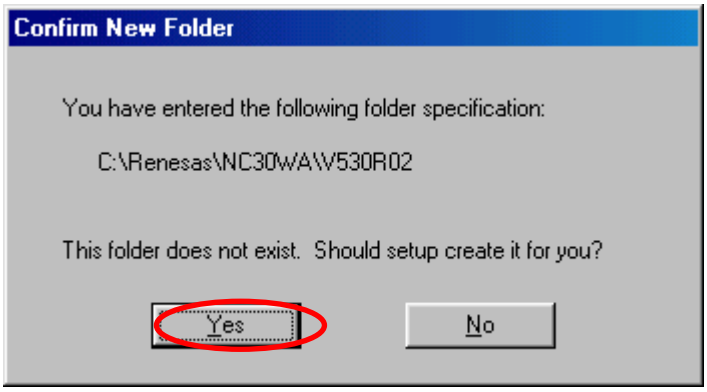
Refer to a new folder name, or select from the existing folder list and click “Next”.



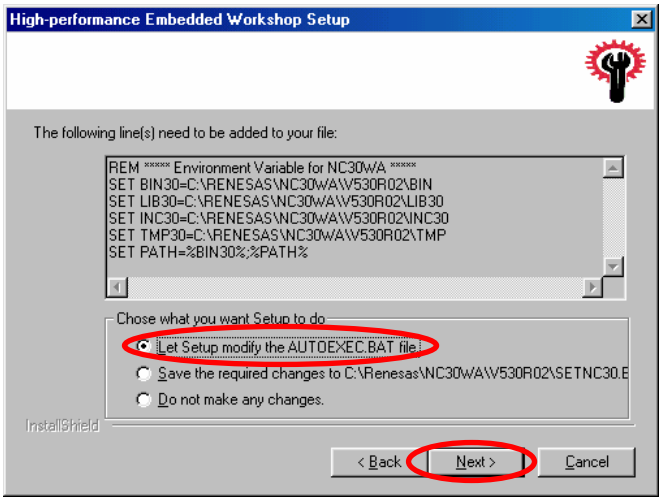
Refer to a new folder name, or select from the existing folder list and click “Next”.



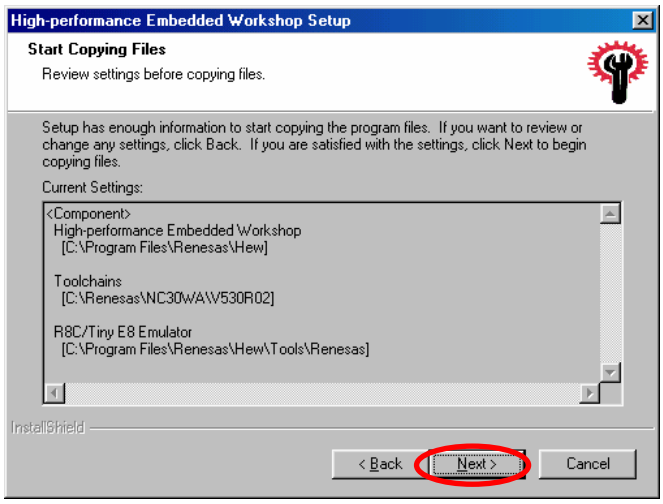
Click “Yes”



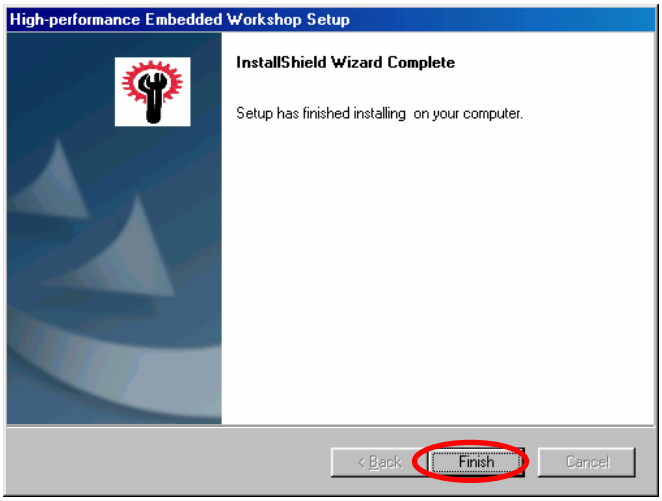
Check the setting before starting the installation and if the setting is correct, click “Next”.



Check the setting before starting the installation and if the setting is correct, click “Next”. Then, a copy will be started.



Click “Finish”.



2.3 USB driver installation

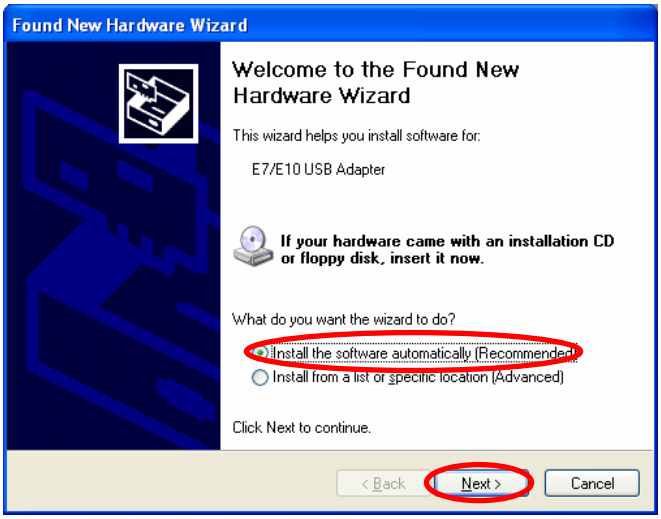
Connect the E8 emulator using the USB cable to the USB port of host machine.

<Windows XP>

Installation procedures are described below.

If the E8 emulator is connected, it is recognized as a new hardware.

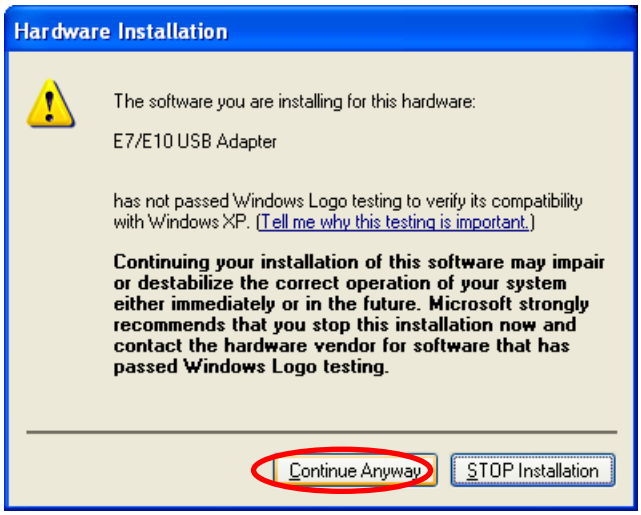
Click “Next” after selecting “Install the software automatically”.



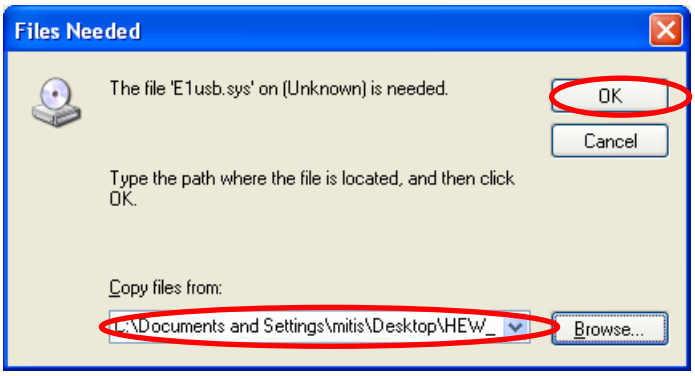
Click “Continue”.

Microsoft has advocated authentication of the USB drivers to the USB vendors in the Microsoft® Windows® XP and Windows®-based operating systems released after Microsoft® Windows® XP. This is aimed at elimination of illegal drivers and improvement of security of PC.

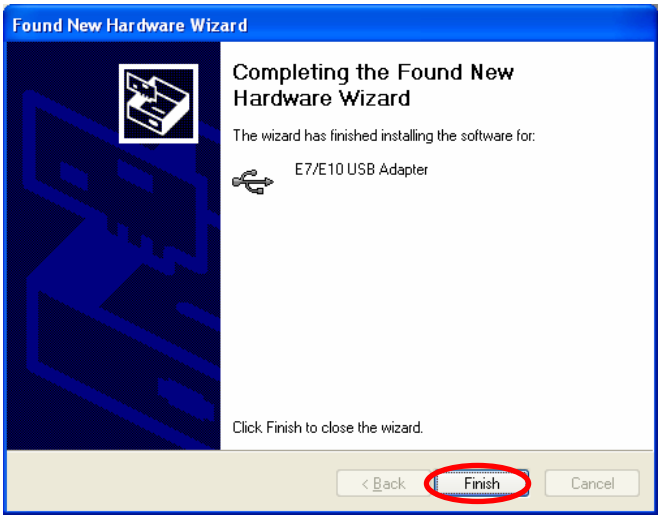
Renesas USB drivers are not authenticated by Microsoft, but we provide them based on the sufficient examination.



Insert CD-ROM and specify ¥dlp_tool¥DRIVERS¥USB¥XP¥. Click “OK”.



Click “Finish”.



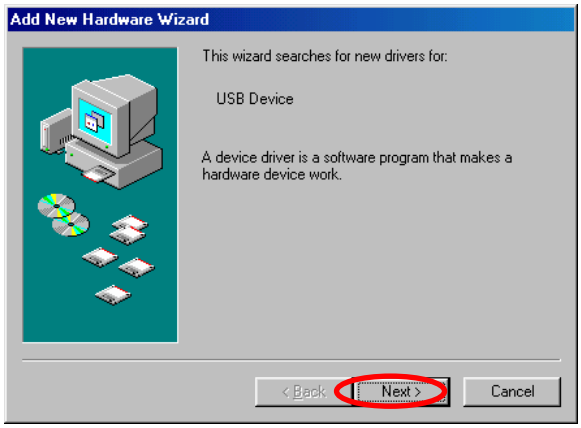
The installation is completed above.

<Windows 98/ME>

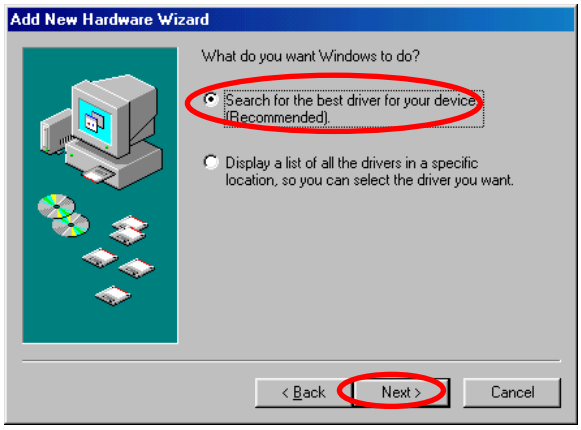
Installation procedures are described below.

If E8 emulator is connected, it is recognized as a new hardware.

Click “Next” and start installing a driver.

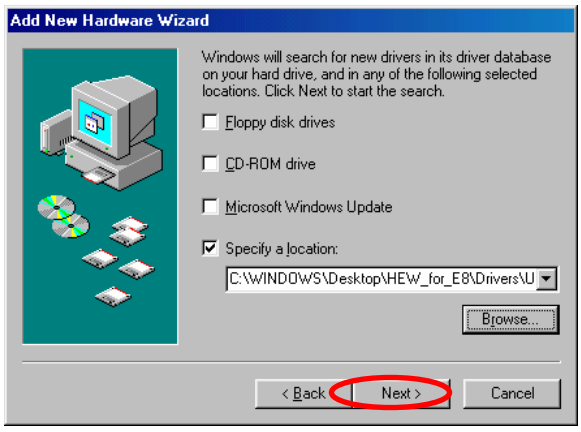


Put a check into “search for the best driver for your device” and click “Next”.

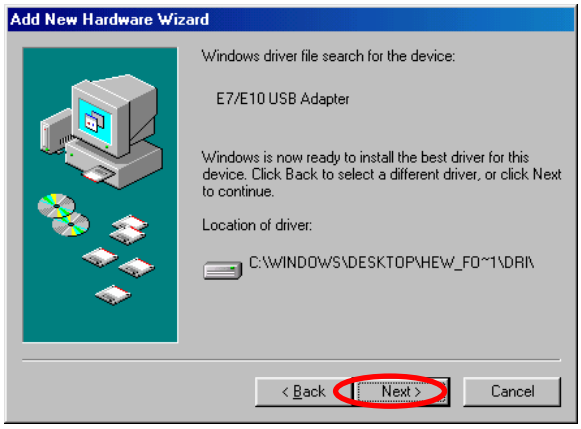


Insert CD-ROM and Put a check into “Specify a location”.

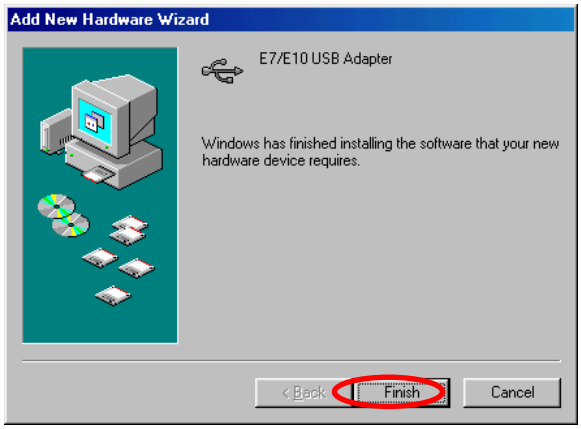
Specify ¥dlp_tool¥DRIVERS¥USB¥ME¥ (or ¥98¥) and click “Next”.



Click “Next”.



Click “Finish”.



The installation is completed above.

2.4 Operate Sample Program

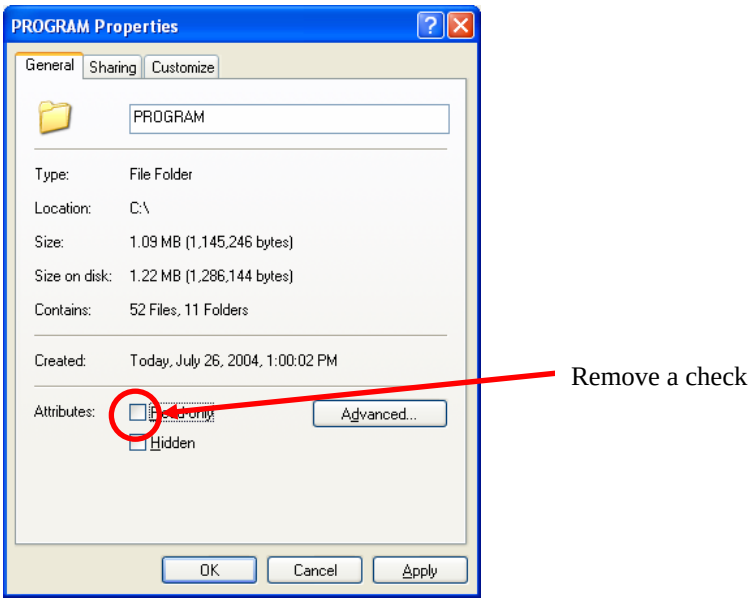
1) Copy ¥Japanese¥M3A0115_17¥PROGRAM¥ in CD-ROM to the given folder.

2) Change a file attribute

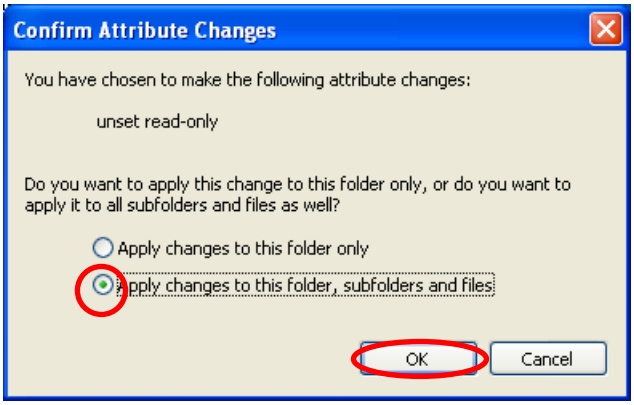
Since the copied file attribute is set to “read-only”, change it to the attribute which can be read or written.

<Windows XP/2000>

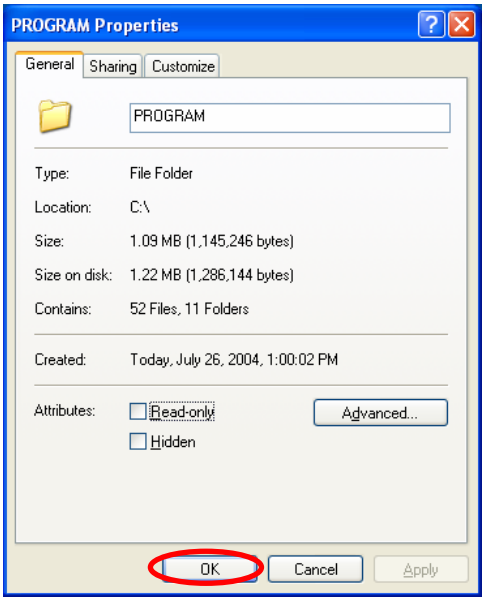
Select “Property” of the copied folder and set to the attribute which can be read or written. Remove a check of “Read-only” and click “Apply”. (Figure shows for Windows XP)



Put a check into “Apply changes to this folder, subfolders and files” and click “OK”.



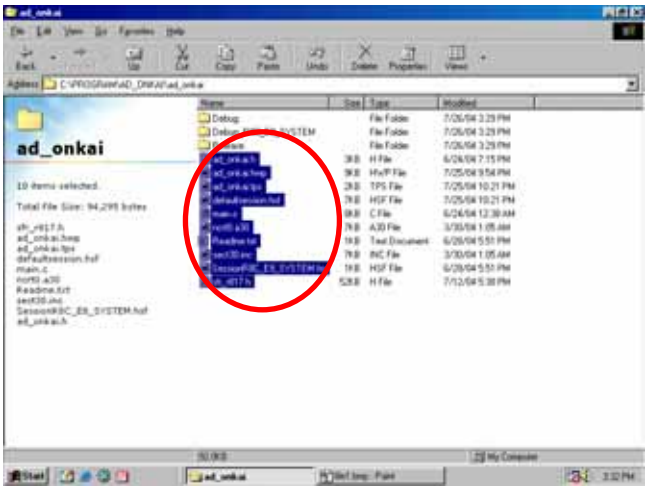
Click “OK”.



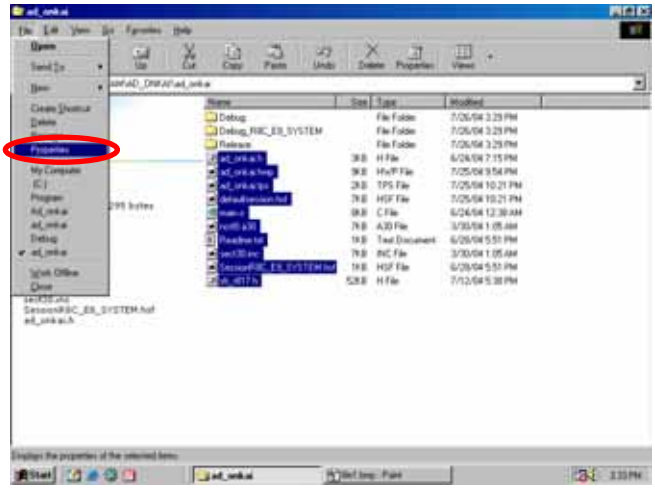
The installation is completed above.

<Windows 98/ME>

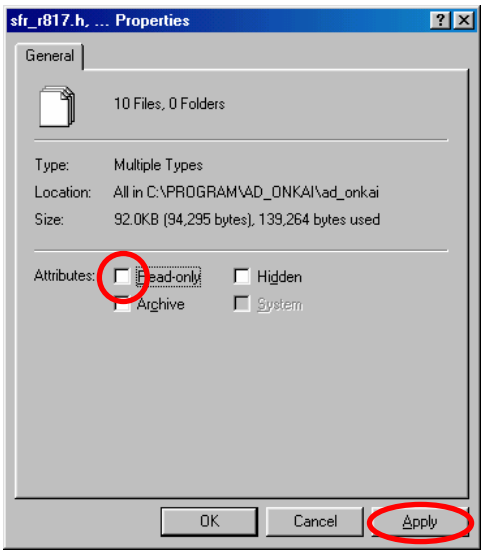
Select all files in the copied folder by a mouse.



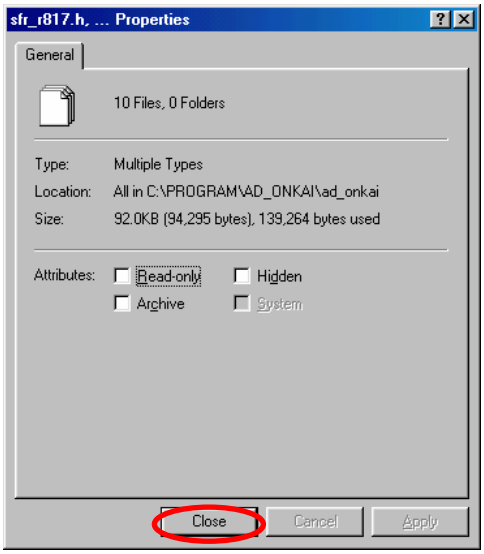
Select “File” and “Property”.



Remove a check of “Read-only” and click “Apply”.



Click “Close”.



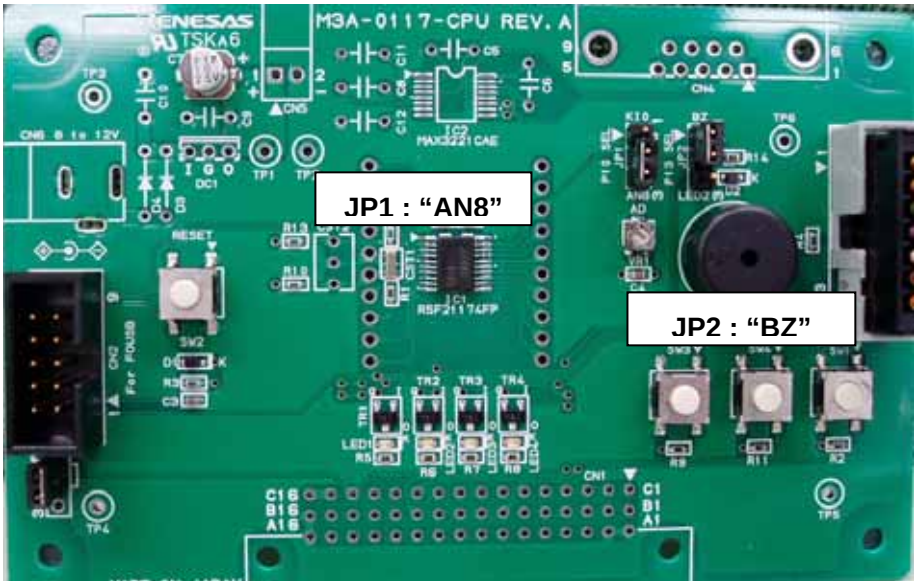
Perform this setting to files in all folders of “3min_timer” and “ad_onkai”.

The installation is completed above.

3) Connect a target board

Use a user cable to the E8 emulator and connect a target board.

Perform the below setting for the jumper setting of a target board.



JP No.	Connecting Status
JP1	“AN8” side
JP2	“BZ” side
JP3	Open

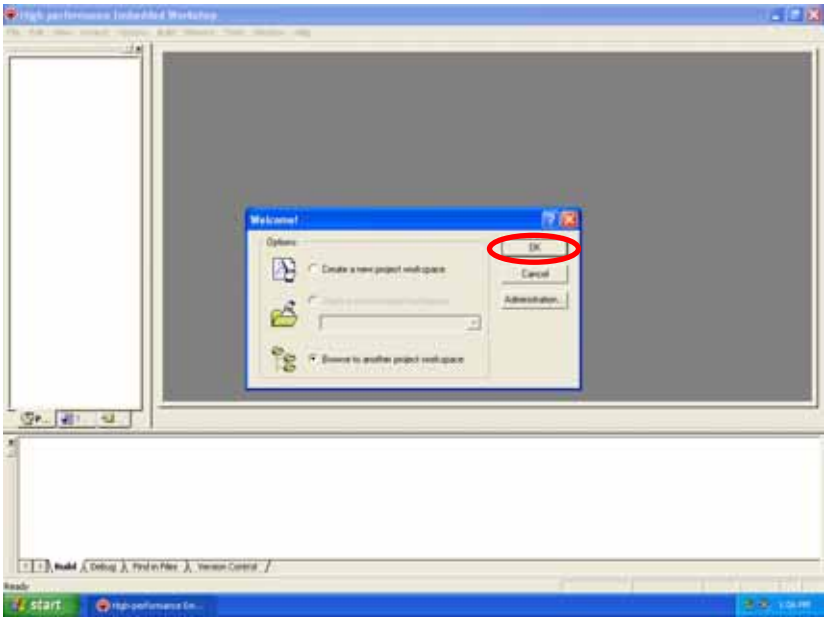
4) Compile a sample program

The example of the musical scale program (ad_onkai.hws) is shown below.

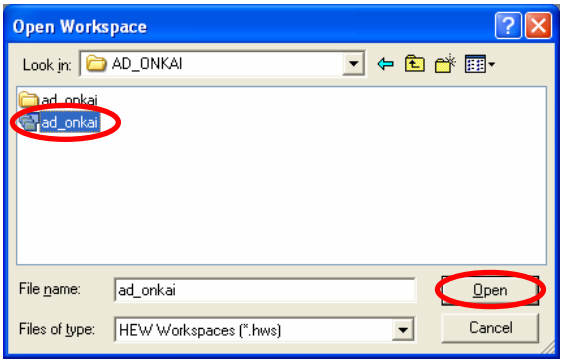
(1) Start High-performance Embedded Workshop

Select “program” of start menu - “Renesas” - “High-performance Embedded Workshop” - “High-performance Embedded Workshop” and click.

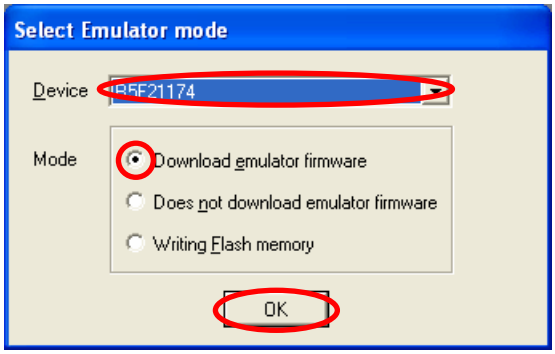
(2) Select “refer to another project work space” and click “OK”.



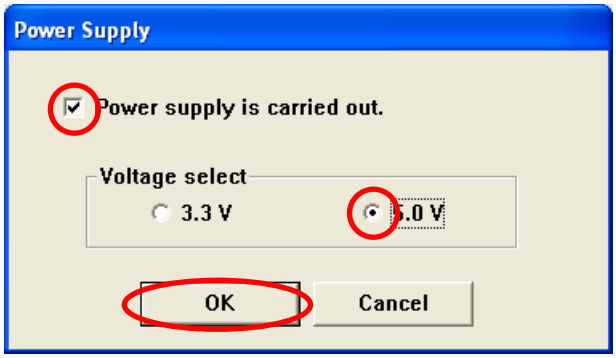
(3) Select the folder which is copied at 1) to “File location”. Select ad_onkai.hws and click “Open”.



(4) Select “R5F21174” for Device and put a check into “Download emulator firmware” for Mode. Click “OK”.



(5) When 5V power supply is performed from E8, put a check into “Power supply is carried out”. Select 5.0V and click “OK”.



(6) Select location to download a firmware and click “OK”.

(8) If clicking “Build” of menu - “All build” and compile.

The installation is completed above.

5) Execute a program

(1) Download a program

Click “Debug” - “Download” - “ad_onkai.x30”.

(2) Reset a CPU

Reset a CPU before executing a program. Click “Debug” - “Reset a CPU”.

(3) Execute

Click “Debug” - “Execute”.

(4) If clicking “Debug” - “Stop a program”, a program will stop. When executing the program again, click “Debug” - “Execute”.

<Musical Scale Program>

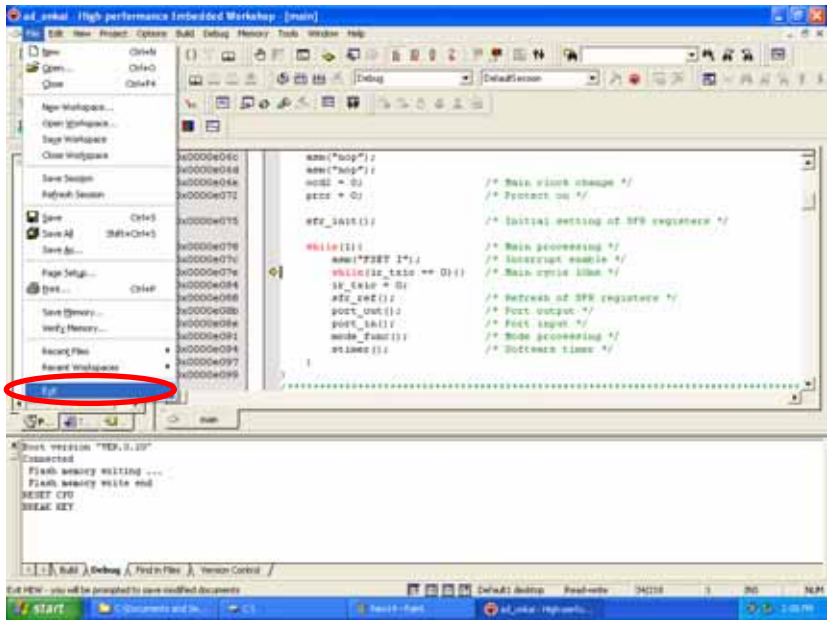
When a program execution starts, LED1(red) lights up. When pressing SW4 on the target board, the buzzer starts sounding. When pressing SW4 again, the buzzer stops sounding.

<Three-minute Timer>

When a program execution starts, LED1(red) lights up. When pressing SW4 on the target board, LED3(green) and LED4(green) light up and start counting. The buzzer sounds in three minutes. When pressing SW1 while counting three minutes, stop counting.

6) Complete High-performance Embedded Workshop

When completing High-performance Embedded Workshop, click “Exit” of File



7) Finally, remove a USB Cable which is connected to the USB port.

REVISION HISTORY

Rev.	Date		Description
		Page	Summary
0.10	2004.08.18	-	First edition issued
1.00	2005.02.01	-	It changed from FDTlight to flash programmer (Flash Development Toolkit). The installation method changed, too.
1.10	2005.03.01	P4	Add accessory softwares to install

R8C/15, R8C/17 StarterKit

Tutorial

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